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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,081	01/05/2005	Yasushi Nakajima	040302-0426	9194

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FOLEY AND LARDNER LLP
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WASHINGTON, DC 20007

EXAMINER

HODGE, ROBERT W

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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08/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/520,081	Applicant(s) NAKAJIMA ET AL.	
	Examiner ROBERT HODGE	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/5/05 4/4/05 3/27/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 1/5/05, 4/4/05 & 3/27/08 have been considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-15 and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,344,290 hereinafter Bossel.

Regarding claim 1, as seen in figures 1 and 2, Bossel teaches a cell plate 1, provided with a supporting body 2, a cell including a solid electrolyte layer 17, a cathode layer 18 and an anode layer 19, an electro conductive gas separator 20 and a holding member 22 (see also column 4, line 33 – column 8, line 59).

Regarding claim 2, as seen in figure 2, Bossel teaches that the holding member 22 holds a part of the gas separator 20.

Regarding claim 3, Bossel teaches that the cells are stacked (column 6, line 67) and are electrically connected (column 6, lines 33-34).

Regarding claims 4 and 5, Bossel teaches the stack is held together by compression produced by a tie rod (column 12, lines 15-16).

Regarding claim 6, as seen in figure 2, Bossel teaches a gas-impermeable metal member 1 on the supporting body 2 that is held by the holding member 22.

Regarding claim 7, as seen in figure 1, Bossel teaches an insulating member 16 provided on the metal member 1 having a same thermal expansion coefficient of the solid electrolyte (i.e. they are constructed of substantially similar materials) (column 6, line 23 et seq. and column 9, letter "c").

Regarding claim 8, as seen in figure 2, Bossel teaches that the holder member 23 is provided with a gas supplying passage.

Regarding claims 9-12, as seen in figures 1 and 2, Bossel teaches open and closed gas passages at the outer periphery as well as providing two separate reactants to different sides of the holding member 22.

Regarding claim 13, as seen in figure 2, Bossel teaches a plurality of holding members 22 that are electrically conductive and separated by an electrically insulative member 23 and the cells are electrically connected (column 6, lines 33-34).

Regarding claims 14 and 15 in an alternative interpretation as seen in figures 1 and 2, Bossel teaches a holding member 23 (i.e. annular seal) which is electrically insulative, with gas separators 1 and 20 on both sides of the cell connected to each

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other and that all of the cells are electrically connected to form a stack (column 6, lines 33-34).

Regarding claim 17, as seen in figures 1 and 2, Bossel teaches the mutual contacting areas of the holding member and separators are identical on both sides and therefore form mirror surfaces.

Regarding claim 18, Bossel teaches the layers are thin films (column 8, line 60 – column 9, line 46).

Regarding claim 19, Bossel teaches the stack is held within a casing (column 8, lines 56-57).

Regarding claim 20, as seen in figure 1 Bossel teaches the holder member 22 is arranged in a hole provided at a central portion 3 of the cell plate.

Regarding claim 21, Bossel teaches the shapes of the cell plate and holder member are circular or polygonal (column 4, lines 33-55).

Claim Rejections - 35 USC § 102/103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 16 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bossel.

Regarding claim 16, Bossel teaches that the separators and the holding member are made of the same material (column 6, lines 52 et seq.). The examiner notes that claim 16 is a product-by-process claim. "Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps". See MPEP § 2113. Therefore because all of the structure recited in claim 16 is present in the Bossel reference, claim 16 is included in the above 102(b)/103(a) rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HODGE whose telephone number is (571)272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Hodge/
Examiner, Art Unit 1795